

Telomere

TTAGGG

tandem DNA repeat . telomere telomerase 가

telomerase

telomere

mitotic clock 가

1-3

Telomerase ribonucleoprotein , RNA dependant DNA polymerase RNA component template

telomeric DNA telomere

1. 1999 3 2000 3 32 41

1,2

telomerase 48

telomere 가

TRAP 가

telomerase 가 4-7

telomerase 가

(trophoblast) 가

7 Izutsu 8

(fetal growth restriction) telomerase 가

가 가

telomerase

dip stick 110 mmHg 2+ , 24

4 g

15 , 16

10 percentile

9

telomerase 가

가 가

10-14

(intervillous space)

가

가

2. -80 50-100 mg

ice-cold wash buffer [10 mM HEPES-KOH (pH 7.5), 1.5 mM MgCl₂, 10 mM KCl, 1 mM dithiothreitol]

100 µL ice-cold lysis buffer [10 mM Tris-HCl (pH7.5), 1 mM MgCl₂, 1 mM EGTA (Egtazic acid), 0.1 mM phenylmethylsulfonyl fluoride (PMSF), 5 mM -mercaptoethanol, 0.5% CHAPS, 10% glycerol]

Kontes tube

30 incubation

4 14000 × g 30

BioRad protein assay kit (Bio Rad Lab, Hercules, CA, USA)

freezing vial

-80